XM-222MK2

SERVICE MANUAL

Canadian Model
AEP Model
UK Model
E Model

Ver 1.1 2002. 03

SPECIFICATIONS

Circuit system	OTL (output transformerless) circuit Pulse power supply
Inputs	RCA pin jacks High level input connector
Input level adjustment range	0.3 – 6 V (RCA pin jacks), 0.6 – 12 V (High level input)
Outputs	Speaker terminals
Speaker impedance	2 – 8 Ω (stereo) 4 – 8 Ω (when used as a bridging amplifier)
Maximum outputs	100 W × 2 (at 4 Ω) 222 W (BTL, at 4 Ω)
Rated outputs (supply voltage at 14.4 V)	35 W × 2 (20 Hz – 20 kHz, 0.04% THD, at 4 Ω) 40 W × 2 (20 Hz – 20 kHz, 0.1% THD, at 2 Ω) 80 W (Monaural) (20 Hz – 20 kHz, 0.1% THD, at 4 Ω)
Frequency response	5 Hz – 80 kHz ($^{+0}_{-3}$ dB)
Harmonic distortion	0.005% or less (at 1 kHz, 4 Ω, 10 W)
Low-pass filter	80 Hz, –18 dB/oct
Power requirements	12 V DC car battery (negative ground)
Power supply voltage	10.5 – 16 V
Current drain	at rated output : 12 A (4 Ω, 35 W × 2) Remote input : 1.5 mA
Dimensions	Approx. 205 × 55 × 158 mm (w/h/d) not incl. projecting parts and controls
Mass	Approx. 1.6 kg not incl. accessories
Supplied accessories	Mounting screws (4) High level input cord (1) Protection cap (1)

Design and specifications are subject to change without notice.

STEREO POWER AMPLIFIER

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e Vehicle Company
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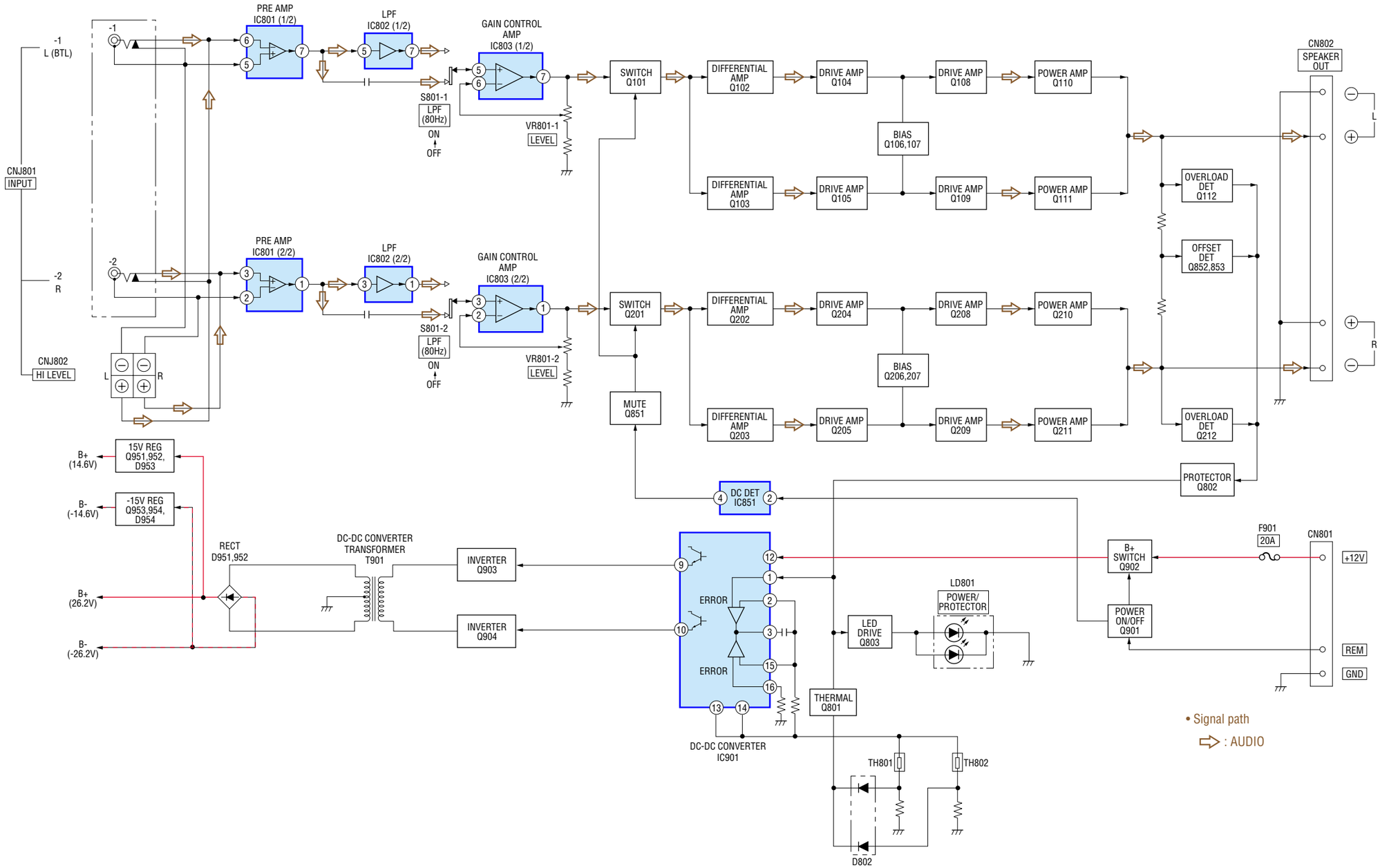
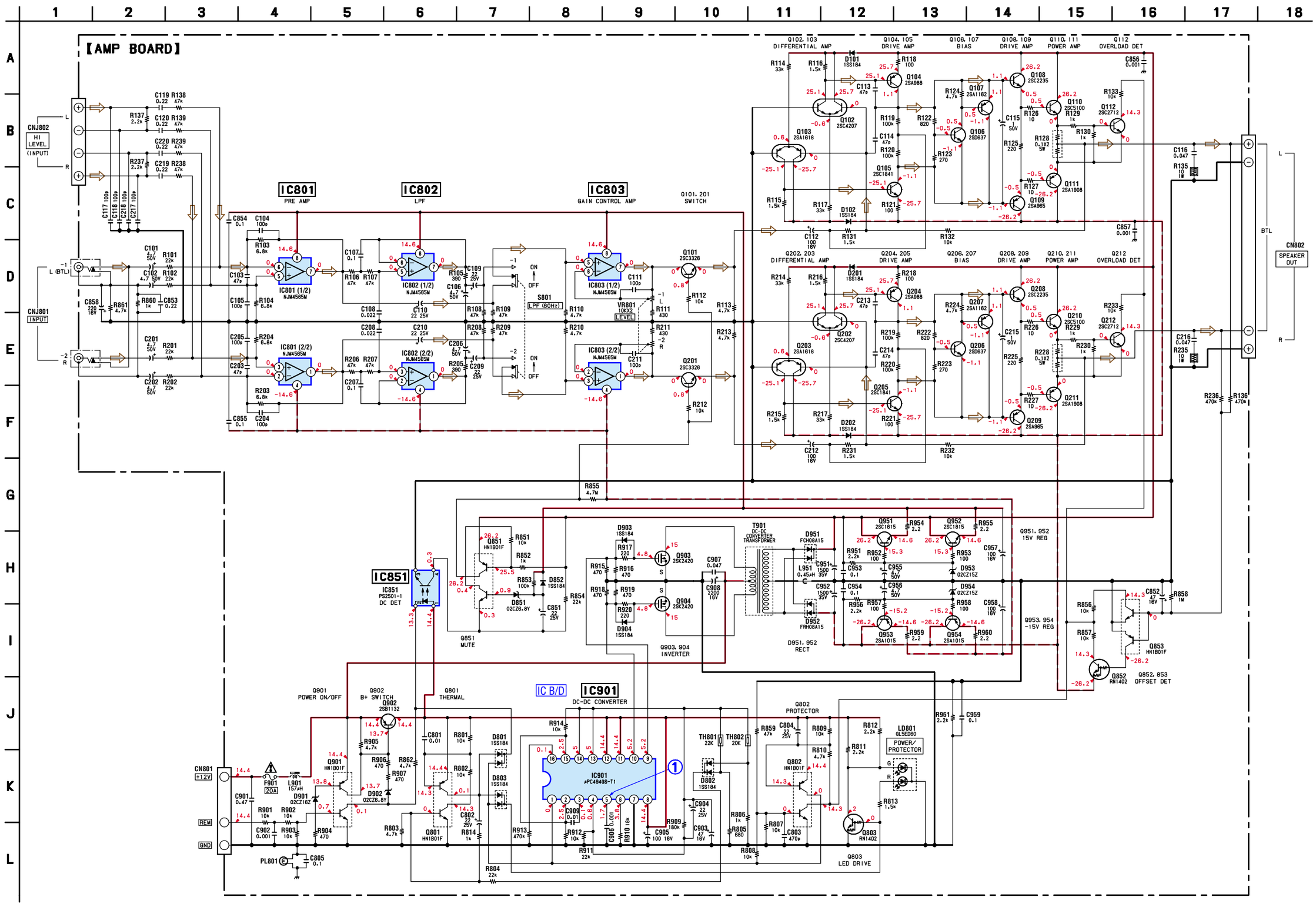
SECTION 3
DIAGRAMS

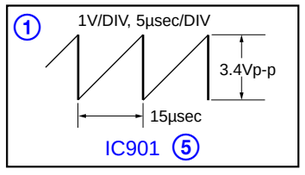
3-1. BLOCK DIAGRAM



3-3. SCHEMATIC DIAGRAM • Refer to page 10 for IC Block Diagram and Common Note on Schematic Diagrams.



• **Waveform**



• **Semiconductor Location**

Ref. No.	Location
D101	G-10
D102	G-9
D201	G-7
D202	G-6
D801	F-11
D802	E-11
D803	F-11
D851	E-10
D852	F-5
D901	D-10
D902	D-11
D903	D-9
D904	D-8
D951	B-7
D952	B-6
D953	D-4
D954	D-3
IC801	E-3
IC802	F-3
IC803	H-3
IC851	E-10
IC901	D-8
LD801	F-14
Q101	F-6
Q102	G-10
Q103	G-9
Q104	G-10
Q105	G-9
Q106	I-10
Q107	H-9
Q108	H-10
Q109	H-9
Q110	J-10
Q111	J-9
Q112	G-9
Q201	G-5
Q202	G-6
Q203	G-6
Q204	G-7
Q205	G-6
Q206	I-6
Q207	H-6
Q208	H-7
Q209	H-6
Q210	J-7
Q211	J-6
Q212	G-5
Q801	E-11
Q802	E-12
Q803	F-13
Q851	E-10
Q852	E-12
Q853	E-12
Q901	D-10
Q902	D-10
Q903	B-9
Q904	B-10
Q951	C-4
Q952	C-4
Q953	C-4
Q954	C-4

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

for schematic diagram:
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- : nonflammable resistor.

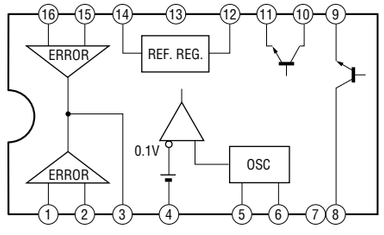
Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

- : B+ Line.
- : B– Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from +12V and REM terminals.
- Voltage is dc with respect to ground under no-signal condition.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path. : AUDIO

for printed wiring boards:
- : parts extracted from the component side.
- : Pattern from the side which enables seeing.

• IC Block Diagram

IC901 µPC494GS-T1

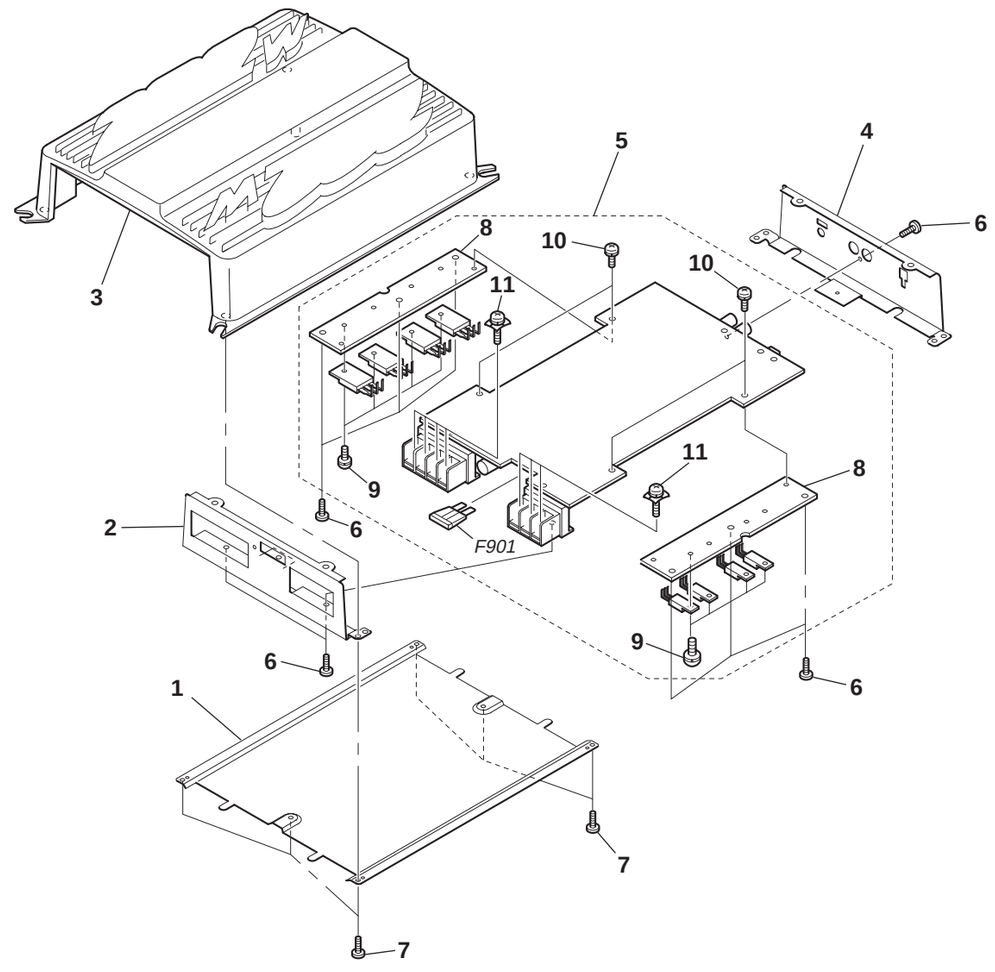


SECTION 4
EXPLODED VIEW

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Accessories are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.



Ref. No.	Part No.	Description	Remark
1	3-240-641-01	PLATE, BOTTOM	
2	3-238-672-01	PANEL, FRONT	
3	3-238-671-01	HEAT SINK (CHINESE MADE)	
3	3-238-671-11	HEAT SINK (JAPAN MADE)	
4	3-238-673-01	PANEL, REAR	
5	A-3274-223-A	AMP BOARD, COMPLETE	
6	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
7	7-685-545-14	SCREW +BTP 3X6 TYPE2 N-S	
8	3-240-642-01	HEAT SINK (SUB 2CH)	
9	3-225-183-01	SCREW (+PSW.TT.3XL)	
10	3-225-184-01	SCREW (+PS.TT.3X6)	
11	3-912-432-01	SCREW (+–B)	
⚠F901	1-532-732-11	FUSE (BLADE TYPE) (AUTO FUSE) 20A	